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INFORMATION FOR DECISION-MAKING

Report of the Secretary-General

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I. MAIN POLICY RECOMMENDATIONS

1. Governments are invited, on a voluntary basis, to take the primary responsibility for the further testing, development and use of indicators of sustainable development, based on the work done to date on identifying the indicators and preparing the corresponding methodology sheets (see paras. 12-17).

2. In undertaking the pilot testing phase, Governments may wish to consider the advantages of working in partnership with other countries in testing and further developing the indicators of sustainable development. For example, linking two countries with different levels of experience with indicators could prove beneficial to both.

3. The Commission on Sustainable Development may welcome follow-up to its decision at its third session on common and compatible systems of access to data, including the further work on establishing common access to United Nations system databases by setting up a sustainable development home page on the World Wide Web, with hot links to the value-added databases to be identified by the Agenda 21 task managers (see paras. 26-33 below).

II. BACKGROUND

4. Chapter 40 of Agenda 21 (Information for decision-making) is concerned with improving the content, format and accessibility of information for decision makers at all levels, from national and international levels to grass-roots and individual levels. This, in turn, requires a continuing emphasis on developing the capabilities to collect, analyse, apply and disseminate data at national and local levels.

5. Scientific, technological, economic, social and cultural information all play an important part in implementing the principles of Agenda 21. The management and use of such information require specialized infrastructures, skills and know-how. Preparing, organizing and delivering information to decision makers on environmental and developmental concerns in a way that can generate their political commitment to respond to such concerns is of paramount importance.

6. Most United Nations Member States, in particular developing countries, need to achieve an integrated development of their information infrastructures. The response to the growing awareness of the crucial importance of information in the development process is encouraged or discouraged by additional needs for bridging the data gap and improving access to information. In the case of developing countries, the trend of acquiring and using information has been reflected by a more systematic and intensive call for international collaboration and assistance. The international community, including the organizations and bodies of the United Nations system is expected to respond to demands of this nature.

III. REVIEW OF PROGRESS ACHIEVED, MAIN POLICY ISSUES AND EXPERIENCES

A. Establishment of coherent information programmes at the national level

7. Developed countries generally have well-established infrastructures for information, including organization, electronic hardware and software, and telecommunications. Perhaps for these reasons, only about half of the countries that responded have developed an information policy for collecting and accessing data related to sustainable development. In contrast, respondents from developing countries all noted that they have created or are in the process of creating such policies at the national level, indicating that such countries are well aware of the importance of information for informed and participatory decision-making, and also illustrating the need for countries to build a capacity to collect, organize, analyse and make accessible relevant information. Development Watch (see paras. 18-21 below) is intended to provide support for such capacity-building. The other activities covered in the present report - indicators of sustainable development, Earthwatch, common access and core data sets - are also designed to strengthen efforts at the national level.

8. Most of the necessary data are available in developed countries. Based on responding countries, the weakest data areas among developed and developing countries, as well as countries whose economies are in transition, are related to changing consumption patterns, integrated decision-making, and technology cooperation and transfer. Excluding developed countries, other particularly weak areas are related to major groups and hazardous waste, solid waste and radioactive waste. A more detailed breakdown of data strengths and weaknesses in the context of Agenda 21 is contained in an addendum to the present report (see E/CN.17/1996/18/Add.1, paras. 5-7).

9. Nowhere is progress with respect to chapter 40 more evident than in the development of indicators of sustainable development. Prior to the United Nations Conference on Environment and Development (UNCED), only a handful of countries had initiated any work in this area. The situation today is markedly different. At least 13 developed and 13 developing countries have programmes under way in various stages of maturity to develop such indicators as a means of organizing information at the national level for decision-making. A few countries with economies in transition have indicated an interest in beginning such programmes as well. Furthermore, most of these countries are linking their efforts to the work being undertaken under the auspices of the Commission to develop a framework and a common list of indicators from which countries may choose consistent with their needs, and some countries have already stated their interest in testing the indicators as well.

10. Major efforts being undertaken at the international level to coordinate information in support of the needs of national decision makers are reviewed below. Sources of information are highly decentralized, but the increasing move towards electronic dissemination makes it possible to link such sources in a manner that promotes universal access, hence the emphasis on coordination and international action. The results described below were based on information solicited from a number of sources. In addition, a total of eight meetings were

organized. Four meetings - one organized by the Department for Policy Coordination and Sustainable Development of the United Nations Secretariat, one organized by the World Bank, one organized by the Ministry of the Environment of the Government of Germany, Nature Conservation and Nuclear Safety, United Nations Environment Programme (UNEP), the European Commission, the Wuppertal Institute and the Scientific Committee on Problems of the Environment (SCOPE), and one organized by the Environment Agency of the Government of Japan - furthered the work programme on indicators of sustainable development. The other four meetings addressed in turn Development Watch, Earthwatch, common access to United Nations system databases and common core data sets, and were organized jointly by the Department, the United Nations Development Programme (UNDP) and UNEP in a series of meetings that were held back-to-back in order to make the most effective and efficient use of the time and expense involved in bringing the appropriate experts to the meetings, as well as to link the meetings to each other in a manner that provided coherence throughout.

11. The United Nations acts primarily as a coordinator. In addition to contributions from Governments and other intergovernmental organizations, a number of non-governmental organizations at both national and international levels are directly involved in bringing better information to decision makers generally and in the design and implementation of Development Watch, indicators of sustainable development and core data sets in particular. Since the request of the Commission with regard to common access was specific to the United Nations system, no bodies outside the system have yet been involved. However, once the initial phase has been completed, it is suggested that other intergovernmental and non-governmental organizations be fully involved in this exercise.

1. Progress report on the programme of work for indicators of sustainable development

12. At its third session, the Commission approved a work programme on indicators of sustainable development, and called upon the organizations of the United Nations system, with the support of other intergovernmental and non-governmental organizations and through the coordination of the Department, to implement, within existing resources, the work programme as contained in the report of the Secretary-General on information for decision-making and Earthwatch (E/CN.17/1995/18). In addition, it requested that a progress report be provided to it at its fourth session; paragraphs 13 to 17 below constitute that report.

13. On 25 and 26 July 1995, the Second Expert Group Meeting on Indicators of Sustainable Development, organized by the Department adopted an implementation plan for the indicators work programme, divided into three phases. Phase I, from May 1995 to April 1996, includes two main elements: the compilation of two rosters of experts to assist in the implementation of the work programme, and the development of methodology sheets for each of the indicators for use by Governments.

14. The rosters have been developed and the methodology sheets prepared with the full cooperation of a large number of organizations (see E/CN.17/1996/18/Add.1, para. 13).

15. The Third Annual World Bank Conference on Environmentally Sustainable Development, (Washington, D.C., 4-6 October 1995) helped in the further definition of the indicators and their framework. An international workshop organized and sponsored by the Environment Agency of the Government of Japan, held in Glen Cove, New York, in February 1996, brought together experts from Governments, organizations and bodies of the United Nations system, other intergovernmental organizations and non-governmental organizations to discuss the methodology sheets and provide suggestions for the further development of the indicators, as needed. The report of that workshop will be presented to the Commission by the Government of Japan.

16. Once the methodology sheets are completed, under phase II countries will begin to use the indicators to assist their own decision-making processes. At the Glen Cove meeting, experts from Bolivia, Brazil, China, Costa Rica, Germany and Morocco indicated their interest in gaining experience by participating in the application of indicators at the country level. Through Development Watch (see paras. 18-21 below), it is anticipated that up to five additional countries will also participate in the pilot phase of the indicators programme.

17. A longer-term project that requires immediate concerted effort is work on both the aggregation of indicators and the identification of linkages among economic, social, environmental and institutional indicators. A scientific workshop on indicators of sustainable development (Wuppertal, Germany, 15-17 November 1995; see para. 10 above for organizers) continued the SCOPE process of looking into these questions which will be dealt with under Phase III of the implementation plan.

2. Interim report on development watch

18. At its third session, the Commission requested UNDP, in cooperation with other relevant organizations, to further define Development Watch and to submit to it at its fifth session a progress report on the implementation of the programme of work of Development Watch, taking into account the need for a close linkage between Development Watch and Earthwatch. 1/ Paragraphs 19-21 below constitute an interim report for the information of the Commission.

19. On 15 and 16 January 1996, UNDP in cooperation with the Department and UNEP organized an inter-agency meeting to respond to the Commission's request. It was agreed that Development Watch is a process for raising awareness at the national level by supporting a more systematic and active approach to data collection and analysis for national policy and operational decisions on sustainable development. Development Watch is intended to assist in national capacity-building for this purpose, and should also provide an opportunity to promote, test and evaluate the use of indicators for formulating and modifying national policies on sustainable development, based on national priorities.

20. Development Watch is tentatively scheduled to be launched, with assistance from UNDP and collaborating partners, through pilot projects in the following eight countries: Bolivia, Botswana, Costa Rica, Malaysia, Morocco, Tunisia, South Africa and Ukraine. Among other activities, Development Watch will promote networking among national counterparts in each of the eight countries to facilitate mutual support and collaboration in local activities. Feedback from the pilot projects will assist in the refinement of the indicators being developed under the auspices of the Commission. Every effort has been made to coordinate this programme with that of Earthwatch and other relevant information programmes already under way.

21. As requested, a progress report will be submitted to the Commission at its fourth session.

B. Strengthening of the United Nations system-wide Earthwatch

22. Despite the general reduction in resources available throughout the United Nations system, significant progress is being achieved in adopting new information technologies so that information collected by all the partners in Earthwatch may be made more widely available. A description of the information sources and activities of all pertinent parts of the United Nations system is already available at the United Nations system-wide Earthwatch home page on the World Wide Web (see E/CN.17/1996/18/Add.1, annex II for a list of Earthwatch and other relevant Web addresses), and plans are being developed for systems to help all users find the information that they require, regardless of where it may be held in the United Nations system. Alternative forms of access to such information for those who do not yet have electronic capabilities are also being maintained. With the agreement in January on common principles and design criteria for information systems and Internet access, including expanded and inter-linked use of the World Wide Web, the United Nations system is ready for the rapid expansion of a coherent network of information sources appropriate to the needs of decision makers.

23. In January 1996, the third inter-agency Earthwatch Working Party agreed on a number of steps to improve collaboration and joint programming throughout the United Nations system. In particular, with their increasing responsibilities for collecting information and reports from the contracting parties, the environmental convention secretariats are being integrated into the system-wide Earthwatch coordination mechanism so as to avoid duplication and ensure the effective use of available information. The problem of how to ensure a more coherent collection of information on the production, management and disposal of wastes was identified as a gap in United Nations system coverage that requires attention. In addition to developing new forms of electronic access, cooperating agencies will continue to explore ways of improving the delivery to decision makers of key data and environmental findings from Earthwatch. The adequacy and effectiveness of long-term early-warning mechanisms for environmental change will also be reviewed to complement the report of the Secretary-General on early-warning capacities of the United Nations system with regard to natural disasters (A/50/526). One major change that is occurring, driven by the need to improve information for decision makers, is a shift away from traditional state-of-the-environment reporting that focuses on the past and

present environment, towards a more forward-looking style of reporting that includes modelling projections and scenarios, which should be more effective in guiding policy-making on environment and sustainability.

24. The report of the scientific and technical planning group for the Global Terrestrial Observing System (GTOS), has been completed, and in January its co-sponsors (the Food and Agriculture Organization of the United Nations (FAO), the International Council of Scientific Unions (ICSU), UNEP, the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the World Meteorological Organization (WMO)) accepted the report in principle, so that with the decision by FAO to host the GTOS support office, the framework for the planned set of global observing systems for land, sea (Global Ocean Observing System (GOOS)) and climate (Global Climate Observing System (GCOS)) is now in place. Close collaboration has been established among the three systems and with other operational observing activities, such as the World Weather Watch and Global Atmosphere Watch of WMO. The co-sponsors are now planning a consultative mechanism for global observations to ensure that close cooperation and a common broad strategy are maintained among all the global observing systems and their applications. All countries are urged to consider how they can participate in these collaborative programmes of global observations, with their significant benefits at the national level: the best information systems for decision-making that may be developed in response to chapter 40 will be ineffective if they lack the basic time series data on the environment and development that are required to keep up with rapidly changing conditions.

25. Work is also continuing on strategies to increase participation in environmental observations at the local and national levels. For instance, at a world summit on religions and conservation held in Windsor, United Kingdom of Great Britain and Northern Ireland, in May 1995, the assembled religious leaders expressed an interest in exploring how the institutions and personnel of religious organizations around the world could cooperate with Earthwatch and demonstrate their concern for the damage being done to the environment by undertaking regular environmental observations in their local areas. If such interest can be linked with the efforts of various non-governmental organizations, and such initiatives as the Global Legislators Organization for a Balanced Environment (GLOBE) initiative to involve schools in environmental observations, a growing movement of popular support for observation and data-collection activities could reinforce and extend governmental and scientific efforts to document what is happening to the environment.

C. Measures for establishing a common or compatible system of access to the respective databases of United Nations system organizations

26. At its third session, the Commission noted the importance of developing among the organizations and bodies of the United Nations system a common or compatible system of access to their respective databases, and invited the Inter-Agency Committee on Sustainable Development (IACSD) to refine measures for establishing such a common or compatible system and to report to it thereon at its fourth session.

27. Subsequently, IACSD agreed that there was a need for further action, bearing in mind the role of the Information Systems Coordination Committee (ISCC) and the International Computing Centre (ICC), and invited the relevant task managers - the Department and UNEP - to further develop this request in consultation with focal points in concerned United Nations system organizations.

28. For this purpose, the Department and UNEP, in cooperation with ISCC and ICC, organized a meeting on common and compatible systems of access to data on 19 January 1996 in New York. The meeting identified a set of principles for designing a United Nations information system, as well as principles for formulating a data-access policy. The meeting discussed data content, modes of access and coordination with ISCC and ICC (see E/CN.17/1996/18/Add.1 for details).

29. In response to specific requests of the Commission, the meeting recommended that the World Wide Web locator home page for the United Nations system being established by ISCC and ICC contain hot links to the proposed sustainable development home page; that a sustainable development home page be established on the World Wide Web, with hot links to the value-added databases identified by Agenda 21 task managers; and that a sustainable development thesaurus be developed by the end of 1996, using the United Nations Bibliographic Information System (UNBIS) thesaurus as the starting-point.

30. The thesaurus should include, inter alia, standardized country codes as a basis for creating a computerized country directory and database, and standardized codes for data related to the indicators of sustainable development as a basis for creating a computerized indicator directory. Once the thesaurus has been developed and accepted, standard procedures should be adopted among all United Nations system organizations for the authors of relevant value-added documents, reports, publications etc., to index their material using the thesaurus and increase compatibility among their databases.

31. At its seventh meeting in February 1996, IACSD discussed and endorsed the recommendations of the above-mentioned meeting.

D. Other efforts to coordinate and harmonize the provision of information to decision makers

32. As one specific step to improve access to databases of United Nations system organizations, the major providers and users of data for international assessments and reports on environment and development have recently agreed on common efforts to make such core data sets more available. An expert working group co-sponsored by UNEP and the Department met in January to identify over 50 core data variables for which related data must ultimately be collected or created, put into standard formats (harmonized) and provided for use by Governments, organizations and research centres around the world. The most significant gaps have also been singled out for further work, so that a series of actions can be planned and taken in order to provide data. These data sets will be coordinated as far as possible with the indicators of sustainable development that are being prepared under the work programme approved by the Commission.

33. Also relevant is the work being done by the Department for Economic and Social Information and Policy Analysis of the United Nations Secretariat towards establishing a common data system with the objective of developing a coordinated and consistent methodological approach to data collection throughout the United Nations system in response to the rapidly increasing demands on national Governments to measure the achievement of the various but often overlapping goals that have emerged from recent major United Nations conferences. For example, work is being done on the development of common approaches for defining how censuses, surveys and sample methodologies can be extended for monitoring purposes; the promulgation of consistent definitions and common data-collection instruments and questionnaires; and the promulgation of statistical standards of collection and reporting, including the use of scientific statistical methodologies.

E. Means of implementation

34. The transfer of electronic technology, despite lower levels of financing in general, is still taking place at a rapid pace in many developing countries. None the less, resources are inadequate not only for electronic technologies but also for infrastructure, telecommunications usage, training and institution-building, data collection and analysis, and organization. There is a need to create national communication nodes, standardize data and develop monitoring capacities.

IV. MAIN TRENDS FOR THE FUTURE

35. The main trends in the area of information for decision-making may be described as an increasing integration of systems; improved access due to technical developments like the World Wide Web; enhanced technology and organization, which may increase the information gap; and a preference for forward-looking information using modelling and projections. As the quantities of available information increase rapidly, more attention must be directed to the quality of such information and the ease with which users can find the appropriate, accurate and timely information that they require.

36. There is a growing emphasis on making information useful to decision makers at all levels; as a result, wider agreement on the use of indicators of sustainable development and increased interest in the analysis and interpretation of data are expected.

37. Coordination, both among the organizations and bodies of the United Nations system and between the United Nations system and other organizations, both intergovernmental and non-governmental, will continue and strengthen both because of functional imperatives and because the relative advantages to each cooperating partner is likely to reinforce the community of coordination. This is especially true in the area of information, in which standardization and harmonization are essential components of success.

38. As more and more countries and more and more people gain access to good information, the gap between such groups and those who are not able to keep pace

will widen dramatically. It is absolutely essential that every effort be made at all levels by all those concerned to ensure that no country is left out of this information revolution.

Notes

1/ Official Records of the Economic and Social Council, 1995, Supplement No. 12 (E/1995/32), para. 6.